

intended scope of the invention.

What is claimed is:

- 1 1. A method for controlling a video image compression system, comprising:
2 compressing a video frame of raw video image data;
3 determining a target frame size based on a target bit rate for said video image
4 compression system;
5 determining an outstanding byte count value related to a number of bytes of compressed
6 video image data to be transmitted from said video image compression system;
7 comparing a current frame size with said target frame size; and
8 adjusting the target bit rate for said video image compression based on said comparison.
- 1 2. The method of claim 1 wherein in said adjusting step, the target bit rate is adjusted if the
2 outstanding byte count is zero and the current frame size is within a predetermined
3 tolerance from said target frame size.
- 1 3. The method of claim 1 wherein in said adjusting step, the target bit rate is adjusted if the
2 current frame size is within a predetermined tolerance from said target frame size and at
3 least one of a current frame rate is within a predetermined tolerance from said target
4 frame rate and the ability of the processor to compress video frames to the target frame
5 size at a target frame rate.

1 4. A method for controlling a video image compression system comprising:
2 compressing a video frame of raw video image data using a processor;
3 determining whether the processor is limited in its ability to compress video image data;
4 adjusting a target frame rate based on a current amount of time taken to compress said
5 video frame of raw video image data.

1 5. The method of claim 4 wherein said target frame rate is adjusted to a value equal to a
2 frame rate of the video capture device divided by an integer divisor.

1 6. The method of claim 5 wherein the frame rate of the video capture device is 30 frames
2 per second and the integer divisor has a value between 1 and 30.

1 7. A method of controlling a video image compression system comprising:
2 compressing a video frame of raw video image data;
3 determining a target frame size based on a target bit rate for said video image
4 compression system;
5 determining an outstanding byte count value related to a number of bytes of compressed
6 video image data to be transmitted from said video image compression system;
7 comparing a current frame size with said target frame size;

1 comparing an average frame rate for the video image compression system to a target
2 frame rate for the video image compression system.

3 adjusting the target bit rate for said video image compression based on said comparisons.

4 8. The method of claim 7 wherein in said adjusting step, the target bit rate is adjusted if the
5 outstanding byte count is greater than zero and the current frame size is within a
6 predetermined tolerance from said target frame size.

1 9. The method of claim 7 wherein in said adjusting step, the target bit rate is adjusted if the
2 current frame size is within a predetermined tolerance from said target frame size and at
3 least one of a current frame rate is not within a predetermined tolerance from said target
4 frame rate and the ability of the processor to compress video frames to the target frame
5 size at a target frame rate.

1 10. A set of instructions residing in a storage medium, said set of instructions capable of
2 being executed by a processor to implement a method for controlling a video image
3 compression system, the method comprising:
4 compressing a video frame of raw video image data;
5 determining a target frame size based on a target bit rate for said video image
6 compression system;
7 determining an outstanding byte count value related to a number of bytes of compressed
8 video image data to be transmitted from said video image compression system;

1 comparing a current frame size with said target frame size; and
2 adjusting the target bit rate for said video image compression based on said comparison.

3 11. The set of instructions of claim 10 wherein in said adjusting step, the target bit rate is
4 adjusted if the outstanding byte count is zero and the current frame size is within a
5 predetermined tolerance from said target frame size.

1 12. The set of instructions of claim 1 wherein in said adjusting step, the target bit rate is
2 adjusted if the current frame size is within a predetermined tolerance from said target
3 frame size and at least one of a current frame rate is within a predetermined tolerance
4 from said target frame rate and the ability of the processor to compress video frames to
5 the target frame size at a target frame rate.

1 13. A set of instructions residing in a storage medium, said set of instructions capable of
2 being executed by a processor to implement a method for controlling a video image
3 compression system, the method comprising:
4 compressing a video frame of raw video image data using a processor;
5 determining whether the processor is limited in its ability to compress video image data;
6 adjusting a target frame rate based on a current amount of time taken to compress said
7 video frame of raw video image data.

1 14. The set of instructions of claim 13 wherein said target frame rate is adjusted to a value
2 equal to a frame rate of the video capture device divided by an integer divisor.

3 15. The set of instructions of claim 14 wherein the frame rate of the video capture device is
4 30 frames per second and the integer divisor has a value between 1 and 30.

1 16. A set of instructions residing in a storage medium, said set of instructions capable of
2 being executed by a processor to implement a method for controlling a video image
3 compression system, the method comprising:
4 compressing a video frame of raw video image data;
5 determining a target frame size based on a target bit rate for said video image
6 compression system;
7 determining an outstanding byte count value related to a number of bytes of compressed
8 video image data to be transmitted from said video image compression system;
9 comparing a current frame size with said target frame size;
10 comparing an average frame rate for the video image compression system to a target
11 frame rate for the video image compression system.
12 adjusting the target bit rate for said video image compression based on said comparisons.

1 17. The set of instructions of claim 16 wherein in said adjusting step, the target bit rate is
2 adjusted if the outstanding byte count is greater than zero and the current frame size is

1 within a predetermined tolerance from said target frame size.

1 18. The set of instructions of claim 17 wherein in said adjusting step, the target bit rate is
2 adjusted if the current frame size is within a predetermined tolerance from said target
3 frame size and at least one of a current frame rate is not within a predetermined tolerance
4 from said target frame rate and the ability of the processor to compress video frames to
5 the target frame size at a target frame rate.

1 19. A video image compression system, comprising:
2 a bit rate controller to compress a video frame of raw video image data;
3 a video controller coupled to said bit rate controller to determine a target frame size
4 based on a target bit rate for said video image compression system and an outstanding byte count
5 value related to a number of bytes of compressed video image data to be transmitted from said
6 video image compression system, said video controller to compare a current frame size with said
7 target frame size and adjust the target bit rate for said video image compression based on said
8 comparison.

1 20. The system of claim 19 wherein said video controller adjusts the target bit rate if the
2 outstanding byte count is zero and the current frame size is within a predetermined
3 tolerance from said target frame size.

1 21. The system of claim 20 wherein said video controller adjusts the target bit rate if the
2 current frame size is within a predetermined tolerance from said target frame size and at
3 least one of a current frame rate is within a predetermined tolerance from said target
4 frame rate and the ability of the processor to compress video frames to the target frame
5 size at a target frame rate.

1 22. A video image compression system comprising:
2 a processor;
3 a bit rate controller to compress a video frame of raw video image data using said
4 processor;
5 a video controller coupled to said bit rate controller to determine whether the processor is
6 limited in its ability to compress video image data and adjust a target frame rate based on a
7 current amount of time taken to compress said video frame of raw video image data.

1 23. The system of claim 22 wherein said bit rate controller adjusts said target frame rate to a
2 value equal to a frame rate of the video capture device divided by an integer divisor.

1 24. The system of claim 23 wherein the frame rate of the video capture device is 30 frames
2 per second and the integer divisor has a value between 1 and 30.

1 25. A video image compression system comprising:
2 a bit rate controller to compress a video frame of raw video image data;
3 a video controller coupled to said bit rate controller to determine a target frame size
4 based on a target bit rate for said video image compression system and an outstanding byte count
5 value related to a number of bytes of compressed video image data to be transmitted from said
6 video image compression system; said video controller to compare a current frame size with said
7 target frame size and to compare an average frame rate for the video image compression system
8 to a target frame rate for the video image compression system, said video controller to adjust the
9 target bit rate for said video image compression based on said comparisons.

1 26. The system of claim 25 wherein the target bit rate is adjusted if the outstanding byte
2 count is greater than zero and the current frame size is within a predetermined tolerance
3 from said target frame size.

1 27. The system of claim 26 wherein the target bit rate is adjusted if the current frame size is
2 within a predetermined tolerance from said target frame size and at least one of a current
3 frame rate is not within a predetermined tolerance from said target frame rate and the

- 1 ability of the processor to compress video frames to the target frame size at a target frame
- 2 rate.